

Part A: Multiple Choice Questions (MCQs)

Instructions: Choose the correct option (a, b, c, or d) for each question.

1. Which of the following is Newton's First Law of Motion also called?
 - a) Law of Inertia
 - b) Law of Acceleration
 - c) Law of Force
 - d) Law of Gravity
 2. An object will not change its motion unless acted upon by a(n):
 - a) Unbalanced force
 - b) Balanced force
 - c) Constant speed
 - d) Friction
 3. The unit of force is:
 - a) Joule
 - b) Newton
 - c) Watt
 - d) Meter
 4. If the net force on an object is zero, then the object will:
 - a) Speed up
 - b) Slow down
 - c) Change direction
 - d) Maintain constant velocity
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Part B: Fill in the Blanks

Instructions: Type the correct word(s) in each blank space.

1. Newton's _____ Law states that for every action, there is an equal and opposite reaction.
 2. Force = _____ $\times$ acceleration
 3. The SI unit of mass is _____.
 4. Inertia depends on the _____ of the object.
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Part C: True or False

Instructions: Write **True** or **False** for each statement.

1. Newton's third law applies only to objects in motion.
2. A heavier object has more inertia than a lighter one.
3. Acceleration is directly proportional to force.
4. Balanced forces cause a change in motion.

Part D: Match the Columns

Instructions: Match the items from Column A to Column B by typing the correct letter next to each number.

Column A	Column B
1. Newton's 1st Law	a) $F = ma$
2. Newton's 2nd Law	b) Action = -Reaction
3. Newton's 3rd Law	c) Law of Inertia
4. Force	d) $\text{kg} \cdot \text{m/s}^2$

Part E: Numerical Problem Solving

Instructions: Solve the following problems. Show your work and include correct units.

- A force of **10 N** is applied to a mass of **2 kg**. What is the acceleration of the object?
Formula: $a = \frac{F}{m}$ $a = \frac{10}{2} = 5 \text{ m/s}^2$
- A **5 kg** box is pushed with an acceleration of **3 m/s²**. Calculate the force required.
Formula: $F = m \times a$ $F = 5 \times 3 = 15 \text{ N}$
- An object of mass **1.5 kg** is moving with an acceleration of **4 m/s²**. What force is acting on it?
Formula: $F = m \times a$ $F = 1.5 \times 4 = 6 \text{ N}$